



U.S. Department  
of Transportation  
**Research and  
Special Programs  
Administration**

**APR 4 2000**

400 Seventh Street, S.W.  
Washington, D.C. 20590

DOT-E 10048  
(SEVENTH REVISION)

**EXPIRATION DATE: March 31, 2002**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Air Products and Chemicals, Inc.  
(Formerly Epichem, Inc., Bethlehem, PA)  
Allentown, PA  
  
(See Appendix A to this document for a list of additional grantees)
2. PURPOSE AND LIMITATION: This exemption authorizes the use of a UN 1A2 drum with inside non-DOT specification metal containers for the transportation in commerce of the materials described in paragraph 6 below. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.181, 173.187, 173.201, 173.202, 173.203, 173.211, 173.212, 173.213, 173.226, and 173.227.
5. BASIS: This exemption is based on the application of Air Products and Chemicals, Inc. dated January 5, 2000, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials descriptions/proper shipping names	Hazard Class/Division	Identification numbers	Packing Group
Aluminum alkyl hydrides	4.2	UN3076	I
Aluminum Alkyls	4.2	UN3051	I
Carbon Tetrachloride	6.1	UN1846	II
Diethylzinc	4.2	UN1366	I
Dimethylzinc	4.2	UN1370	I
Flammable liquids, toxic, n.o.s.	3	UN1992	II
Magnesium Alkyls	4.2	UN3053	I
Metal alkyls, water-reactive, n.o.s.	4.2	UN2003	I
Metal alkyls, water-reactive, n.o.s. (Tertiarybutylphosphine)	4.2	UN2003	I (Zone B)
Organometallic compound solution, water-reactive, flammable, n.o.s.	4.3	UN3207	I
Pyrophoric solids, organic, n.o.s.	4.2	UN2846	I
Pyrophoric liquids, organic, n.o.s.	4.2	UN2845	I
Selenium compound, n.o.s.	6.1	UN3283	II
Tellurium compound, n.o.s.	6.1	UN3284	II
Toxic, liquids, organic, n.o.s.	6.1	UN2810	I

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Hazardous materials descriptions/proper shipping names	Hazard Class/Division	Identification numbers	Packing Group
Toxic solids, flammable, organic, n.o.s.	6.1	UN2930	I
Toxic liquid, organic, n.o.s. (Tertiarybutylarsine)	6.1	UN2810	I (Zone A)
Water-reactive liquid, toxic, n.o.s.	4.3	UN3130	I

7. PACKAGING AND SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification welded cylinder described as a bubbler overpacked in a UN1A2 drum. The inside containers must be as described in Epichem, Limited's drawing number 10536, dated January 27, 1988. The inside containers must be designed to Section VIII, Division I of the ASME Code. In addition:

(1) The capacity of the inside containers may not exceed 4 liters.

(2) The design pressure of the inside containers must be at least 400 psig.

(3) The bodies of the inside containers must be constructed of ASTM A240-316 or equivalent stainless steel with a minimum thickness of 1/16 inch. The end plates must be constructed of ASTM A249-316 or equivalent stainless steel with a minimum thickness of 1/8 inch.

(4) The inside containers may be equipped with valves. No opening in the inside containers may exceed one inch in diameter.

(5) Inside containers must be surrounded on all sides by incombustible cushioning material inside the UN 1A2 drum.

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b. TESTING:

(1) Each inside container must be inspected and retested at least once every five years at 5/3 times the design pressure in accordance with § 173.34.

(2) Each inside container must be hydrostatically tested with a pressure of at least 728 psig at the time of manufacture.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. Net quantity of Division 4.2 liquids may not exceed two-thirds of the rated capacity of the outer drum.

d. Drivers must have been instructed as to necessary safeguards and proper procedure in the event of fire, or accident.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.

10. MODAL REQUIREMENTS: A copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

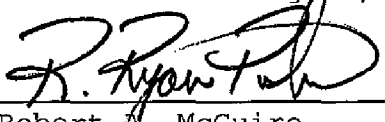
- o Registration required by 49 CFR 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

  
\_\_\_\_\_  
For Robert A. McGuire  
Acting Associate Administrator  
for Hazardous Materials Safety

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\_\_\_\_\_  
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.

Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: KFW

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APPENDIX A

The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with §§ 107.107 or 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
Epichem, Inc. Haverhill, MA	4/6/00	APR 24 2000	3/31/02



*for* Robert A. McGuire  
Acting Associate Administrator for  
Hazardous Materials Safety